

WORKING CAPITAL MANAGEMENT ANTECEDANTS IMPACT ON FIRM SPECIFIC FACTORS: A TEN YEAR REVIEW OF KARACHI STOCK EXCHANGE

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ABSTRACT. The study aims of investigate relationship of working capital antecedents and profitability of the company. Seven variables are taken as proxy variable to measure working capital and its management. Population of the study is based on Karachi stock exchange listed companies. The sample of study is manufacturing sector of Pakistan. Thus, sample period contains on the ten years from (2005-2014). All variables have sound reliability and data is normally distributed. Therefore, correlation and regression analyses are applied. Hence, study revealed significant relationship of working capital management and profitability.

1. INTRODUCTION

The excess of current assets over current liabilities is explained as working capital. It is said to be an investment that a company has to make for its operational needs. It finances acquisition of current assets like stocks, trade debtors, cash and cash conversion cycle which are in turn to generate profit, to meet payments of supplier in timely manners of material and services. Thus, all these antecedents are based on working capital requirement ingredients i-e stocks, debtors, advances, cash, accruals and creditors.

However, simply working capital ensures the firm's ability to finance short term assets through short term financing sources (Ahmadi, Arasi and Garajafary, 2012). Thus, the success of corporate financial executive's dependent upon their efficient movements of receivables and payables that represent efficient management of working capital (Filbeck and Krueger, 2005).

Therefore, objective of the study is to investigate the relationship of working capital management, firm size and debt level with firm profitability. And to identify the natures of decisions associated with working capital management ingredients and profitability.

Working capital management is ever hot and life time topic of finance and is much investigated in prior studies all over the contexts. While, current study aim is to investigate it specifically on Pakistani listed companies data containing on ten years' time period to predict better findings. Therefore, sample years of the data set are based on recent past years because Pakistan is not purely developed country in scientific investigation (Aycan et al., 2000). Hence, significance of the study is to acquire reliable outcomes that could be valuable for theorists and practitioners.

The scheme of the study contains on four parts. First part concludes the literature and hypothesis of the study. Second part elaborates the research methodology. Third part briefly elaborates study results. Fourth part concludes the findings of investigations.

2. LITERATURE REVIEW

However, Ahmadi, Arasi & Garajafary, (2012) have concluded in their study that efficient management of working capital requirements boost organizational financial efficiency and ultimately firm's profitability. Moreover, efficient management of short term and long term debt also boosts firm profitability.

Thus, Padachi, (2006) has supported the argument by investigating Mauritian manufacturing market. In some cases working capital management debt level and firm size is also found opposite

in direction if the period of collecting and paying funds varies and vice versa (Ghodrati and Ghanabari, 2014).

Reheman et al. (2010) also have found similar results in their study that size of firm and profitability also increase through pure and efficient management of working capital. Moreover, Reheman & Nasr (2007) has also supported such argument in their study by investigating working capital management and firm profitability. So hypothesis of the study are given as below,

H1: *There is positive relationship between working capital management and profitability.*

H2: *There is positive relationship between firm size and profitability.*

H3: *There is a negative relationship between company debt and profitability.*

3. RESEARCH METHODOLOGY

The study aims to investigate the relationship of working capital determinants on manufacturing sector profitability. Thus the nature of study is exploratory and secondary data is collected from financial reports. The study population contains on listed companies in Karachi stock exchange. The study sample contains on 114 companies of various sectors relating to manufacturing sector.

And period coverage is restricted to 2005 January to 2014 January. There is a limit in the data that some companies got late their listing status at Karachi stock exchange. Thus some companies' data is missing and convenience sampling technique is used to acquire data. Data is acquired from www.sbp.com.pk database.

Regarding instrumentation stepwise and panel data regression method is applied to add each variable and its estimation power over dependent variable. Thus, following model is developed for relationship test,

$$NOP = \beta_0 + \beta_1 ACP + \beta_2 APP + \beta_3 CCC + \beta_4 LOS + \beta_5 CR + \beta_6 DR + \beta_7 ATO + \beta_8 LEV + e$$

NOP = Net Operating Profit

ACP = Average Collection Period

APP = Average Payment Period

CCC = Cash Conversion Cycle

LOS = Log of Sale

CR = Current Ratio

DR = Debt Ratio

ATO = Fixed Asset to Total Asset

LEV = Leverage

e = Error Term

4. RESULTS AND ANALYSES

Table 01
Sector Representation

Sector Name	% Representation
Chemical Sector	24.7%
Food Sector	44.0%
Chemical Sector	20.3%
Beverages Sector	01.5%
Pharmacy Sector	07.0%
Paper Sector	03.5%
Total Representation	100%

Table 02
Reliability Statistics

Variables	Cronbach's Alpha
ACP	0.76
APP	0.72
CCC	0.84
FS	0.71
CR	0.68
DR	0.77
ATO	0.58
NOP	0.74

Reliability measures represents the nature and percentage of errors associated with variables of study. And data is normalized by using Cronbach's Alpha value. Thus, the data showed standard and higher value regarding variables. The value of Cronbach's alpha of ACP is 0.76, APP 0.72, CCC 0.84, FS 0.71, CR 0.68, DR 0.77, ATO 0.58, LEV 0.64 and NOP 0.74 respectively. Such higher values have shown the higher consistency of the data.

Table 03
Data Normality

Variable	N	Skewness	Kurtosis
ACP	114	0.873	1.54
APP	114	0.091	1.34
CCC	114	0.045	1.07
FS	114	0.671	1.21
CR	114	-0.851	-1.58
DR	114	0.048	0.97
ATO	114	0.057	0.31

To analyses the normal distribution of data in study data normality test is executed that is observed by two values i-e Skewness value and kurtosis value (Pearson, 1895). In current study the data shown required values of kurtosis ranged between -02 to +02 as mentioned in table 03. Thus, in table 03 kurtosis values lies in between -1.58 to +1.54. Hence, entire data of recent study is normally distributed

Table 04
Descriptive Statistics

Variable	Mean	Standard Deviation
ACP	1.47	0.083
APP	0.71	0.065
CCC	0.04	0.025
FS	7.231	8.957
CR	9.157	3.337
DR	11.57	3.87
ATO	14.56	5.09
NOP	0.87	0.976

Descriptive statistical measures are carried out to measure average of responsiveness of data and data variations. Thus, mean value and standard deviation value is used to follow. The mean value of ACP is 1.47 and standard deviation value is 0.083. APP mean value is 0.71 and standard deviation value is 0.065. CCC mean value is 0.04 and deviation value is 0.025. FS mean value is 7.231 and standard deviation value is 8.957. CR mean and deviation value are 9.157 and 3.337 respectively. While, DR mean value is 11.57 and standard deviation value is 3.87. ATO mean value

is 14.56 and standard deviation value is 5.09. LEV mean value is 0.902 and standard deviation value is 0.367. And NOP mean value is 0.87 and standard deviation value is 0.976.

Table 05
Correlation Analyses

Variable	1	2	3	4	5	6	7	8	9
ACP	1								
APP	.395**	1							
CCC	.401**	.502**	1						
FS	.456**	.484**	.487**	1					
CR	.331**	.402**	.450**	.459**	1				
DR	-.331**	-.324**	-.347**	-.351**	-.391**	1			
ATO	.321**	.333**	.359**	.376**	.393**	.397**	1		
NOP	.337*	.340*	.343*	.364*	.402*	.438*	.449*	.500*	1

*. Correlation is significant at 0.05 levels (02-tailed)

**. Correlation is significant at 0.01 levels (02-tailed)

To measure correlation and coefficient of correlation Pearson's correlation is executed in current study. The correlation table shown correlation among working capital management determinants i-e average collection period, average payment period, cash conversion cycle, current ratio and leverage, firm size and debit ratio respectively. Thus, correlation among ACP and APP is (0.395** p<0.01), APP and CCC is (0.401** p<0.01, 0.502** p<0.01), CCC and FS (0.456** p<0.01, 0.484** p<0.01 & 0.487** p<0.01), FS and CR (0.331** p<0.01, 0.402** p<0.01, 0.450** p<0.01 & 0.459** p<0.01), CR and DR (-0.331** p<0.01, -0.324** p<0.01, -0.347** p<0.01, -0.351** p<0.01 & -0.391** p<0.01), DR and ATO has (0.321** p<0.01, 0.333** p<0.01, 0.359** p<0.01, 0.376** p<0.01, 0.393** p<0.01 & 0.397** p<0.01) and finally ATO and NOP has (0.337** p<0.01, 0.340** p<0.01, 0.343** p<0.01, 0.364** p<0.01, 0.402** p<0.01, 0.438** p<0.01, 0.449** p<0.01 & 0.500** p<0.01) respectively.

Table 06
Regression Analyses

Variables	Beta	t. Statistics	Significance
C	4.13	4.716	0.000
ACP	0.01**	0.127	0.000
APP	0.05**	0.681	0.000
CCC	0.10**	1.53	0.001
FS	0.138**	1.69	0.000
CR	0.54**	3.51	0.000
DR	-0.56**	2.00	0.001
ATO	0.20**	2.86	0.000
NOP	0.057**	0.310	0.000

Because of multiple predictor variables multivariate regression is applied. Therefore, coefficient of all determinants of working capital management i-e ACP is found significant (0.01** p<0.01), APP (0.05** p<0.01), CCC (0.10** p<0.01), CR (0.54 p<0.01) and ATO (0.20, p<0.01). Firm size is also found significant because FS (0.138** p<0.01). Moreover, debt ratio is also found negatively significant because DR (-0.56** p<0.01) and NOP (0.057** p<0.01) respectively. Thus working capital management is positively associated with profitability, firm size is positively linked with profitability and debit level is found negatively linked with firm's profitability. Therefore, all hypothesized are accepted with 100% ratio. Hence, study supported all prior investigations.

5. Conclusion

On the bases of hypothesis of the study working capital has significant relationship with firm's profitability, firm size has also significant relation with firm profitability and debt of the firm has also negative significant relationship with profitability. Therefore, all hypotheses are accepted. The main reason of hypothesis acceptance and significant relationship with profitability is that in Pakistan most of the companies have invested cash in their operations. But corporate managers have less focus on receivables that has decreased shares holder's wealth. And to improve share's holder wealth corporate financial executives should decrease average days to receivables. Thus, by managing receivables companies can boost their profit more. Moreover, study has supported past investigation and has significant relation.

REFERENCES

- [1] Aycan, et al. (2000). Impact of Culture on Human Resource Management Practice: A Countries Comparison. *Applied Psychology: An International Review*, 49(01), 192-221
- [2] Filbeck, G. and T.M. Krueger, 2005b. An analysis of working capital management results across industries. *Am. J. Bus.*, 20(2): 11-20.
- [3] H. Ghodrati & J. Ghanbari, (2014). A study on relationship between working capital and profitability. *Management Science Letters* 4 (2014) 1675–1684
- [4] K. Padachi, (2006). Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms. *International Review of Business Research Papers* Vo.2 No. 2. October 2006, Pp. 45 -58
- [5] M. Ahmadi, I. S. Arasi, & M. Garajafary, (2012). Studying the Relationship between Working Capital Management and Profitability at Tehran Stock Exchange: A Case Study of Food Industry. *Research Journal of Applied Sciences, Engineering and Technology* 4(13): 1868-1874
- [6] R. Abdul & M. Nasr, (2007). Working capital management & firm profitability: Case of Pakistan. *International review of business research papers*. Vol 03, No 01, pp. 279-300.
- [7] Reheman et al., (2010). Working Capital Management and Corporate
- [8] Performance of Manufacturing Sector in Pakistan. *International Research Journal of Finance and Economics*. Issue 47 (2010)